Electronic Version
Stylesheet Version v1.1.1

TEMPERATURE-BASED VEHICLE WAKEUP STRATEGY TO INITIATE FUEL CELL FREEZE PROTECTION

Abstract

A method of removing moisture from a fuel cell stack is provided. The presence of liquid water in a fuel cell stack is undesirable should the temperature drop below freezing since the structures within the fuel cell are subject to degradation and potentially damage by ice formation. The method of the invention comprises measuring the temperature in the vicinity of a fuel cell vehicle when the fuel cell vehicle has been shut down, and then flowing a moisture-removing medium through the fuel cell when the ambient temperature drops to a predetermined temperature. The moisture-removing medium is flowed through the fuel cell for a sufficient time to remove a sufficient amount of the water in the fuel cell so that the fuel cell is not degraded by freezing of water. The present invention also provides a fuel cell water removing system which implements the method of the present invention.